Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) An agent for inhibiting phosphorylation of c-Jun, wherein the agent comprises one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 as active ingredients:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

2. (original) The agent for inhibiting phosphorylation of c-Jun according to Claim 1, wherein the peptide group consists of (i), (ii), (iii), (iv), (x), and (xi).

3. (original) A method for inhibiting the phosphorylation of c-Jun, wherein the method comprises putting one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 (JNK3) in coexistence with JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting

the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

4. (original) The method for inhibiting the phosphorylation of c-Jun according to Claim 3, wherein the peptide group consists of (i), (ii), (iii), (iv), (x), or (xi).

5. (original) An agent for inhibiting the ability of c-Jun to activate transcription, wherein the agent comprises one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 as the active ingredients:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

6. (original) A method for inhibiting the ability of c-Jun to activate transcription, wherein the method comprises putting one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 in coexistence with JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

7. (currently amended) A pharmaceutical composition comprising an effective dose of the agent for inhibiting the phosphorylation of c-Jun according to Claim 1~~ or 2, or the agent for inhibiting the ability of c-Jun to activate transcription of c-Jun according to Claim 5~~.

8. (original) The pharmaceutical composition according to Claim 7, wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by c-Jun N-terminal kinase 3.

9. (original) A pharmaceutical composition comprising an effective dose of one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3, wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

10. (original) A pharmaceutical composition comprising an effective dose of one or more polynucleotides encoding at least one peptide selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 (JNK3), wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several acid residues in an amino acid

sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

11. (original) The pharmaceutical composition according to Claim 8, wherein the disease caused by the phosphorylation of c-Jun by c-Jun N-terminal kinase 3 is a neurodegenerative disease.

12. (original) The pharmaceutical composition according to Claim 11, wherein the neurodegenerative disease is polyglutamine disease, Huntington's disease, spinocerebellar ataxia, bulbospinal muscular atrophy, dentatorubropallidoluysian atrophy, Alzheimer's disease, Down's disease, Parkinson's disease, Lewy body dementia, multiple system atrophy, familial amyotrophic lateral sclerosis, progressive supranuclear palsy, corticobasal degeneration, Pick's disease, familial British dementia, Creutzfeldt-Jakob disease, Gerstmann-Stranssler syndrome, mad cow disease (bovine spongiform encephalopathy) (BSE), or familial dementia accompanying neuroserpin inclusion bodies.

13. (original) A method for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3, wherein the method comprises putting one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 (JNK3) in coexistence with JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

14. (original) A method for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3, wherein the method comprises utilizing one or more polynucleotides encoding at least one peptide selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 (JNK3) to express the peptide encoded by the polynucleotides, wherein the peptide inhibits the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List,

(vi) a peptide comprising at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide having a homology of 70% or more to at least one peptide of said (i) to (v), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xi) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

15. (currently amended) A method for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3, wherein the method comprises using the pharmaceutical composition according to ~~at least one of Claims 7 to 12~~ Claim 7.

16. (currently amended) The method for preventing and/or treating disease(s) according to ~~at least one of Claims 13 to 15~~ Claim 13, wherein the disease caused by the phosphorylation of c-Jun by JNK3 is a neurodegenerative disease.

17. (original) The method for preventing and/or treating disease(s) according to Claim 16, wherein the neurodegenerative disease is polyglutamine disease, Huntington's disease, spinocerebellar ataxia, bulbospinal muscular atrophy, dentatorubropallidoluysian atrophy, Alzheimer's disease, Down's disease, Parkinson's disease, Lewy body dementia, multiple system atrophy, familial amyotrophic lateral sclerosis, progressive supranuclear palsy, corticobasal degeneration, Pick's disease, familial British dementia, Creutzfeldt-Jakob disease, Gerstmann-Stranssler syndrome, mad cow disease (bovine spongiform encephalopathy) (BSE), or familial dementia accompanying neuroserpin inclusion bodies.

18. (original) At least one peptide selected from the following peptide group:

(i) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(ii) a peptide comprising the peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iii) a peptide comprised of at least 5 consecutive amino acid residues in the amino acid sequence represented by SEQ ID NO: 1 in Sequence List, or

(iv) a peptide having mutations of one to several amino acids in at least one peptide of (i) to (iii).

19. (original) The peptide according to Claim 18, wherein the peptide has a function for interacting with c-Jun N-terminal kinase 3 (JNK3).

20. (currently amended) A polynucleotide comprising a nucleotide sequence encoding a peptide according to Claim 18 ~~or 19~~, or a complementary sequence thereof.

21. (original) A polynucleotide comprised of a nucleotide represented by SEQ ID NO: 7 in Sequence List.

22. (currently amended) A polynucleotide which hybridizes with a polynucleotide according to Claim 20 ~~or 21~~ under a stringent conditions.

23. A recombinant vector comprising a polynucleotide according to ~~at least one of Claims 20 to 22~~ Claim 20.

24. (original) The recombinant vector according to Claim 23, wherein the recombinant vector is an expression recombinant vector.

25. (currently amended) A transformant transfected with a recombinant vector according to Claim 23 ~~or 24~~.

26. (currently amended) A method for producing a peptide according to Claim 18 ~~or 19~~, comprising a process for culturing a transformant transfected with ~~a~~ an expression recombinant vector comprising a polynucleotide comprising a nucleotide sequence encoding said peptide ~~according to Claim 24~~.

27. (currently amended) An antibody which immunologically recognizes a peptide according

to Claim 18 ~~or 19~~.

28. (original) A method of identifying a compound that mediates or inhibits the interaction of a peptide according to Claim 19 with c-Jun N-terminal kinase 3, wherein the method comprises using at least one selected from the peptide, a polynucleotide encoding the peptide, a recombinant vector comprising the polynucleotide, a transformant transfected with the recombinant vector, or an antibody which immunologically recognizes the peptide.

29. (original) A method of identifying a compound that mediates or inhibits the expression of a polynucleotide encoding a peptide according to Claim 19, wherein the method comprises using at least one selected from the polynucleotide encoding the peptide, a recombinant vector comprising the polynucleotide, a transformant transfected with the recombinant vector, or an antibody which immunologically recognizes the peptide.

30. (original) A pharmaceutical composition comprising an effective dose of at least one selected from a peptide according to Claim 19, a polynucleotide encoding the peptide, a recombinant vector comprising the polynucleotide, a transformant transfected with the recombinant vector, or an antibody which immunologically recognizes the peptide.

31. (original) An agent for inhibiting the phosphorylation of c-Jun, wherein the agent comprises one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 as the active ingredients:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in

Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List, wherein the peptide is human originated,

(vi) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprising the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xi) a peptide having mutations of one to several amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiii) a peptide having a homology of 70% or more to peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by

JNK3,

(xiv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

32. (original) An agent for inhibiting the ability to activate transcription of c-Jun, wherein the agent comprises one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 as the active ingredients:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List and human originated,

(vi) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprising the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xi) a peptide having mutations of one to several amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiii) a peptide having a homology of 70% or more to peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

33. (original) A pharmaceutical composition comprising an effective dose of an agent for inhibiting the ability to activate transcription of c-Jun according to Claim 32.

34. (original) The pharmaceutical composition according to Claim 33, wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the

phosphorylation of c-Jun by c-Jun N-terminal kinase 3.

35. (original) A pharmaceutical composition comprising an effective dose of one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 (JNK3), wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List and human originated,

(vi) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprising the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xi) a peptide having mutations of one to several amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiii) a peptide having a homology of 70% or more to peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

36. (original) A pharmaceutical composition comprising an effective dose of one or more polynucleotides encoding at least one peptide selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase (JNK3), wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun caused by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 3 in Sequence List and human originated,

(vi) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide comprising the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(x) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xi) a peptide having mutations of one to several amino acid residues in an amino acid sequence of the peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xii) a peptide having a homology of 70% or more to at least one peptide of said (i) to

(iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiii) a peptide having a homology of 70% or more to peptide of said (v), wherein the peptide is human originated and has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(xiv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(xv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

37. (original) The pharmaceutical composition according to at least one of Claim 34, wherein the disease caused by the phosphorylation of c-Jun by c-Jun N-terminal kinase 3 is a neurodegenerative disease.

38. (original) The pharmaceutical composition according to Claim 37, wherein the neurodegenerative disease is polyglutamine disease, Huntington's disease, spinocerebellar ataxia, bulbospinal muscular atrophy, dentatorubropallidoluysian atrophy, Alzheimer's disease, Down's disease, Parkinson's disease, Lewy body dementia, multiple system atrophy, familial amyotrophic lateral sclerosis, progressive supranuclear palsy, corticobasal degeneration, Pick's disease, familial British dementia, Creutzfeldt-Jakob disease, Gerstmann-Stranssler syndrome, mad cow disease (bovine spongiform encephalopathy) (BSE), or familial dementia accompanying neuroserpin inclusion bodies.

39. (original) An agent for inhibiting phosphorylation of c-Jun, wherein the agent comprises one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 as the active ingredients:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (1) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

40. (original) A method for inhibiting the phosphorylation of c-Jun, wherein the method comprises putting one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase 3 (JNK3) in coexistence with JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

41. (original) The method for inhibiting the phosphorylation of c-Jun according to Claim 40, wherein the peptide group consists of (i), (ii), (iii), (iv), (ix), or (x).

42. (original) An agent for inhibiting the ability of c-Jun to activate transcription, wherein the agent comprises one or more than two peptides selected from the following peptide group having

a function for interacting with c-Jun N-terminal kinase 3 as the active ingredients:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

43. (original) A method for inhibiting the ability of c-Jun to activate transcription , wherein the method comprises putting one or more peptides selected from the following peptide group

having a function for interacting with c-Jun N-terminal kinase 3 (JNK) in coexistence with JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

44. (original) A pharmaceutical composition comprising an effective dose of an agent for

inhibiting phosphorylation of c-Jun according to Claim 39, or an agent for inhibiting the ability of c-Jun to activate transcription.

45. (original) A pharmaceutical composition according to Claim 44, wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3.

46. (original) A pharmaceutical composition comprising an effective dose of one or more peptides selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase (JNK3), wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

47. (original) A pharmaceutical composition comprising an effective dose of one or more polynucleotides encoding at least one peptide selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase (JNK3), wherein the pharmaceutical composition is an agent for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

48. (currently amended) The pharmaceutical composition according to ~~at least one of Claims 45 to 47~~ Claim 45, wherein the disease caused by the phosphorylation of c-Jun by c-Jun N-terminal kinase is a neurodegenerative disease.

49. (original) The pharmaceutical composition according to Claim 48, wherein the neurodegenerative disease is polyglutamine disease, Huntington's disease, spinocerebellar ataxia, bulbospinal muscular atrophy, dentatorubropallidoluysian atrophy, Alzheimer's disease, Down's disease, Parkinson's disease, Lewy body dementia, multiple system atrophy, familial amyotrophic lateral sclerosis, progressive supranuclear palsy, corticobasal degeneration, Pick's disease, familial British dementia, Creutzfeldt-Jakob disease, Gerstmann-Stranssler syndrome, mad cow disease (bovine spongiform encephalopathy) (BSE), or familial dementia accompanying neuroserpin inclusion bodies.

50. (original) A method for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3, wherein the method comprises putting one or more peptides

selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase (JNK3) in coexistence with JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide comprised of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in Sequence List.

51. (original) A method for preventing and/or treating disease(s) caused by the

phosphorylation of c-Jun by JNK3, wherein the method comprises utilizing one or more polynucleotides encoding at least one peptide selected from the following peptide group having a function for interacting with c-Jun N-terminal kinase (JNK3) to express the peptide encoded by the polynucleotides, wherein the peptide inhibits the phosphorylation of c-Jun by JNK3:

(i) BMAL1,

(ii) BPL1,

(iii) a peptide composed of the amino acid sequence represented by SEQ ID NO: 1 in Sequence List,

(iv) a peptide composed of the amino acid sequence represented by SEQ ID NO: 2 in Sequence List,

(v) a peptide comprising at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vi) a peptide composed of at least 5 consecutive amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(vii) a peptide having mutations of one to several amino acid residues in an amino acid sequence of at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(viii) a peptide having a homology of 70% or more to at least one peptide of said (i) to (iv), wherein the peptide has a function for inhibiting the phosphorylation of c-Jun by JNK3,

(ix) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 4 in Sequence List, or

(x) a peptide comprised of the amino acid sequence represented by SEQ ID NO: 5 in

Sequence List.

52. (currently amended) A method for preventing and/or treating disease(s) caused by the phosphorylation of c-Jun by JNK3, wherein the method comprises using a pharmaceutical composition according to Claim 44 ~~at least one of Claims 44 to 49~~.

53. (currently amended) The method for preventing and/or treating disease(s) according to ~~at least one of Claims 50 to 52~~ Claim 50, wherein the disease caused by the phosphorylation of c-Jun by c-Jun N-terminal kinase 3 is a neurodegenerative disease.

54. (original) The method for preventing and/or treating disease(s) according to Claim 53, wherein the neurodegenerative disease is polyglutamine disease, Huntington's disease, spinocerebellar ataxia, bulbospinal muscular atrophy, dentatorubropallidoluysian atrophy, Alzheimer's disease, Down's disease, Parkinson's disease, Lewy body dementia, multiple system atrophy, familial amyotrophic lateral sclerosis, progressive supranuclear palsy, corticobasal degeneration, Pick's disease, familial British dementia, Creutzfeldt-Jakob disease, Gerstmann-Stranssler syndrome, mad cow disease (bovine spongiform encephalopathy) (BSE), or familial dementia accompanying neuroserpin inclusion bodies.